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10/088,001	03/14/2002	Ulrich Joos	401585	6444

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EXAMINER

BUMGARNER, MELBA N

ART UNIT PAPER NUMBER

3732

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/088,001

Applicant(s)

JOOS, ULRICH

Examiner

Melba Bumgarner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 7-11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1, 5, and 8 are objected to because of the following informalities: claim 1, item d) “art” should read –part--, claim 8, item a) insert –line—after “ridge”, and claims 5 and 8, it is recommended that the brackets around mm be changed to parenthesis, since printer may confuse it as brackets for indicating deleted matter. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 5, it is unclear what part of the implant has a maximum radius (also it is suggested that in line 4 “for” be changed to –having--), which direction the distance is measured in “the outer thread extends a distance in the range. . .” and what is meant by “the distance is proportional to the length of the root part increases.” In claim 8, it is unclear what is meant by “the length of the thread teeth is inversely proportional to the length of the root part”.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

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patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang (5,984,681). Huang discloses a dental implant 10 comprising a bottommost implant tip 16 located at an apex, a root part which has a length, extends to the tip, is intended to be fitted in a jawbone, and has a parabolic outer contour with the tip as a vertex, an implant neck adjoining the root part, which extends in a coronal direction and is intended to lie inside the gingiva and an outer thread 18 having a pitch and provided on the root part, wherein the root part has the parabolic outer contour along all of the length of the root part and a theoretical ridge line at which it adjoins the neck (figure 7). As to claim 2, figure 3 shows the outer thread has an outer contour extending parallel to the contour of the root part and appears to end at a distance between about 1 to 2 mm from the ridge line. As to claim 10, the implant neck is made of titanium (column 4 line 23) and patentable weight is not given to the process by which the implant neck is formed.

6. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Moisiadis (DE 4041378). Moisiadis discloses a dental implant 10 comprising a bottommost implant tip located at an apex, a root part 14 which has a length, extends to the tip, is intended to be fitted in a jawbone, and has a parabolic outer contour with the tip as vertex, an implant neck adjoining the root part, which extends in the coronal direction, and an outer thread 16 having a pitch and provided on the root part, wherein the root part has the contour along all of the length of the root part and a theoretical ridge line at which it adjoins the neck (figure 1). Patentable weight is not given to the intended use of the neck. As to claim 10, the implant neck is made of titanium

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(column 2 line 67) and patentable weight is not given to the process by which the implant neck is formed.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moisiadis. Moisiadis discloses a dental implant that shows the limitations as described above, the outer thread has an outer contour extending parallel to the contour of the root part, and the outer thread ends at a distance from the ridge line; however, Moisiadis does not show the distance being 1 mm to 4 mm. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific distance of the outer thread end from the theoretical ridge line, as it is not disclosed as critical to the claimed invention. As to claim 11, Moisiadis discloses the implant neck being cylindrical; however, Moisiadis does not show the neck having a height in the range of 1 to 3 mm. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific range of the height of the neck. The specific range is not disclosed as critical to the claimed invention. As to claim 15, it would have been an obvious matter of choice to one of ordinary skill in the art as to the neck having a dimension transverse to the coronal direction that changes in the coronal direction as opposed to being cylindrical. The specific shape is not disclosed as critical to the claimed invention.

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9. Claims 5, 9 and 13 are rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Mochida et al. Huang discloses a dental implant that shows the limitations as described above; however, Huang does not show the dimensions of the outer thread. Mochida et al. teach a dental implant (embodiment 3) comprising the outer thread including self-cutting thread teeth, the length of the root part of 8 mm and pitch of the outer thread of 1 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the outer thread of Mochida et al. in order to provide improved fixation of the self-cutting implant and good bearing capacity in the bone in view of Mochida et al. As to claims 9 and 13, Huang shows the implant made of biocompatible material of titanium; however, Huang does not show the root part having a rough surface. Mochida et al. teach a dental implant comprising a root part having a rough surface, which is coated by ceramic-coating (column 5 lines 44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the dental implant of Huang to be ceramic-coated as in Mochida et al. in order to enhance the development of the bond between the implant and the bone in view of Mochida et al.

10. Claims 7-9, 13, and 14 are rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Moisiadis in view of Mochida et al. (5,642,996). Moisiadis discloses a dental implant that shows the limitations as described above and the outer thread includes thread teeth; however, Moisiadis does not show dimensions of the thread teeth. Mochida et al. teach a dental implant comprising the outer thread including thread teeth, a root part radius of 1.35 mm, length of root part of 8 mm, length of thread teeth of .2 to .4 mm, the height of thread teeth is not disclosed but would be in the maximum range of 0 to 1.7 mm, as the maximum pitch is disclosed

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as 1.7 mm (figure 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the size of teeth of Mochida et al. in order to provide improved fixation of the self-cutting implant and good bearing capacity in the bone in view of Mochida et al. As to claims 9 and 13, Moisiadis shows the implant made of biocompatible material of titanium; however, Moisiadis does not show the root part having a rough surface. Mochida et al. teach a dental implant comprising a root part having a rough surface, which is coated by ceramic coating (column 5 lines 44). It would have been obvious to one having ordinary skill in the art to modify the dental implant of Moisiadis to be ceramic-coated as in Mochida et al. in order to enhance the development of the bond between the implant and the bone in view of Mochida et al. It would have been an obvious matter of choice to one of ordinary skill in the art as to the implant neck being coated with ceramic and the process by which the neck is formed. The specific finish on the implant neck is not disclosed as critical to the claimed invention.

#### ***Allowable Subject Matter***

11. Claims 3, 4, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

12. Applicant's arguments filed April 23, 2004 have been fully considered but they are not persuasive. The prior art show an implant comprising a root part having parabolic outer contour as shown in the figures of Huang and Moisiadis. The term "parabolic outer contour" is given its broadest interpretation when its curve is not defined, for example by equation. Moisiadis shows

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a root part having a parabolic contour along its entire length, when the root part is defined as the portion below the cylindrical part as shown, which is also the threaded part as required in the claims.

*Conclusion*

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melba Bumgarner whose telephone number is 703-305-0740. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

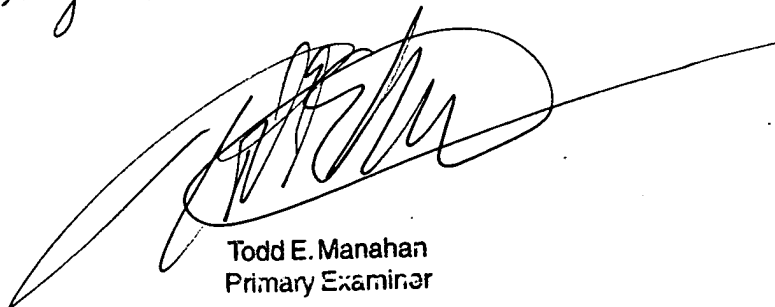


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

*Melba Bumgarner*

Melba Bumgarner  
Patent Examiner

A handwritten signature in black ink, appearing to read 'Todd E. Manahan', is written over a large, light-colored oval. The signature is stylized with a long horizontal stroke extending to the right.

Todd E. Manahan  
Primary Examiner